

I claim:

1. A method for tracking the transmission of a digital file over the Internet comprising the steps of:

- 5 receiving packets constituting segments of the file in transit over the Internet;
examining file headers in said packets to determine the presence of specific
identifying indicia therein; and
recording the Internet Protocol header source address for each of the packets
containing said specific identifying indicia.

2. The method of claim 1, including the additional step of recording the Internet Protocol header destination address for the file.

3. The method of claim 1, including the additional step of transmitting said identifying indicia and said source Internet address to a proprietor of the file.

4. The method of claim 1, including the additional step of transmitting said identifying indicia and said source Internet address to a remote site.

5. The method of claim 1, wherein said examining step further includes:
searching said file headers for TCP headers containing port numbers
indicative of an email message;

- 5 searching each of said packets, in which port numbers indicative of email
messages were found, for an attachment; and
when said attachment is found, locating the source Internet address in an
IP header for the file containing the attachment.

6. The method of claim 1, wherein said identifying indicia comprises a user-defined character sequence selected from the group consisting of:

- an extension to an existing file format, prepended to the file;
a sequence of bits embedded in the file; and

5 an absence of code in a predefined area within the file.

7. A system for tracking an Internet transmission of a digital file containing identifying indicia in a file header, the system comprising:

a server which receives the file;

5 a router which routes packets comprising the file to a next Internet leg in the transmission path of the file; and

a monitor, connected between said server and said router, which processes packets constituting segments of the file;

wherein said monitor is programmed to:

10 examine file headers in said packets to determine the presence of said identifying indicia therein; and

record the source Internet address for said file for each of the packets containing said identifying indicia.

8. The system of claim 7, wherein said monitor is further programmed to:

search said file headers for TCP headers containing port numbers indicative of email messages;

5 search each of said packets, in which port numbers indicative of email messages were found, for an attachment; and

locate the source Internet address in an IP header for the file containing the attachment.

9. The method of claim 7, wherein said identifying indicia comprises a user-defined character sequence selected from the group consisting of:

an extension to an existing file format, prepended to the file;

a sequence of bits embedded in the file; and

5 an absence of code in a predefined area within the file.

10. A system for tracking an Internet transmission of a digital file containing identifying indicia in a file header, the system comprising:

a modem which receives the file;

a server for processing the file; and

5 a monitor, connected between said modem and said server, which processes packets constituting segments of the file;

wherein said monitor is programmed to:

examine file headers in said packets to determine the presence of said identifying indicia therein; and

10 record the source Internet address for said file for each of the packets containing said identifying indicia.

11. A method for tracking the transmission of a digital file over the Internet comprising the steps of:

receiving packets constituting segments of the file in transit over the Internet;

5 examining file headers in said packets to determine the presence of said identifying indicia therein; and

recording, for each of the packets containing said identifying indicia, the source Internet address for the file.

12. The method of claim 11, wherein said examining step further includes:

searching said file headers for TCP headers containing port numbers indicative of email messages;

5 searching each of said packets, in which port numbers indicative of email messages were found, for a MIME header indicative of an attachment; and

when said MIME header indicative of an attachment is found:

searching a header directly prepended to the file to find said identifying indicia therein, when said MIME header is indicative of an attachment containing a type of said file sought; and

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locating the source Internet address in an IP header for the file
containing the attachment, when said identifying indicia is found.

13. The method of claim 11, wherein said identifying indicia comprises a user-
defined character sequence selected from the group consisting of:

an extension to an existing file format, prepended to the file;

a sequence of bits embedded in the file; and

5 an absence of code in a predefined area within the file.

14. A method for tracking the transmission of a digital file over the Internet
comprising the steps of:

placing identifying indicia in said digital file;

using a data communications monitoring device to capture packets of information

5 being transmitted via the Internet;

examining certain ones of said packets to determine the presence of said
identifying indicia in said file; and

recording the source and destination Internet addresses for each of the packets
containing said identifying indicia, and the identity of the file associated therewith.

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15. The method of claim 14, wherein said identifying indicia is prepended to said
header.

16. The method of claim 14, wherein said identifying indicia is embedded in said
file.

17. A method for tracking the transmission of a digital file over the Internet
comprising the steps of:

receiving packets constituting segments of the file in transit over the Internet;

searching said packets for TCP headers containing port numbers indicative

5 of email messages;

searching each of said packets, in which said port numbers indicative of
email messages were found, for a MIME header indicative of an attachment; and

when said MIME header indicative of an attachment is found:

10 searching a header directly prepended to the file to locate said
identifying indicia therein, when said MIME header is indicative of an
attachment containing a type of said file sought;

 locating the source Internet address in an IP header for the file
containing the attachment containing the type of said file sought, when said
identifying indicia is located; and

15 recording, for each of the packets containing said identifying
indicia, the source Internet address for the file.

18. The method of claim 17, including the additional step of transferring said
identifying indicia and said source Internet address to a proprietor of the file.

19. The method of claim 18, including the additional step of transferring
additional information in said file to the proprietor of the file.

20. A system for tracking an Internet transmission of a digital file containing
identifying indicia in a file header, wherein said file comprises a plurality of packets
constituting segments of the file, the system comprising:

 a server for receiving the file;

5 a router for routing packets comprising the file to a next Internet leg in the
transmission path of the file; and

 monitoring means, connected between said server and said router, for
examining file headers in said packets to determine the presence of said
identifying indicia therein; and

10 means for recording the source Internet address for said file for each of the
packets containing said identifying indicia.

21. The system of claim 20, wherein said monitoring means further comprises searching means for:

- 15 locating said file headers for TCP headers containing port numbers indicative of email messages;
- locating each of said packets, in which port numbers indicative of email messages were found, for an attachment; and
- locating the source Internet address in an IP header for the file containing
- 20 the attachment.

22. A method for tracking the transmission of a digital file over the Internet comprising the steps of:

- receiving packets constituting segments of the file in transit over the Internet;
- 5 searching said packets for an MPEG Layer 3 header prepended to the file; searching said MPEG Layer 3 header for identifying indicia located therein, if said MPEG Layer 3 header is located;
- locating the source Internet address in an IP header for the file containing said identifying indicia, if said identifying indicia is located; and
- 10 recording, for each of the packets containing said identifying indicia, the source Internet address for the file.

23. The method of claim 22, wherein said identifying indicia is located in a header having a field indicating that the frame size thereof is zero bytes in length.

24. The method of claim 22, wherein said identifying indicia is located in a header having a frame size field indicating that there is no information field appended to the frame size field.

25. The method of claim 22, wherein said identifying indicia comprises a user-defined character sequence located in the 'frame ID' and 'flags' fields of an ID3v2 frame header.

26. The method of claim 22, wherein said identifying indicia comprises a user-defined character sequence selected from the group consisting of:

an extension to an existing file format, prepended to the file;

a sequence of bits embedded in the file; and

an absence of code in a predefined area within the file.

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